

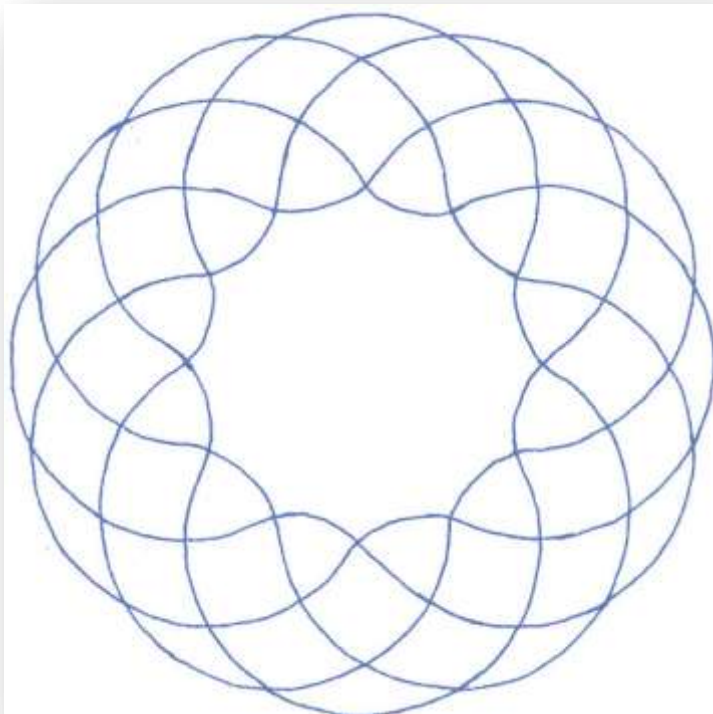


From the desk of Pierre Beaudry



AN ELECTRODYNAMIC MUSICAL TORUS

An Analysis Situs correlation among music, electromagnetism, and the Peace of Westphalia.
by Pierre Beaudry, July 1, 2012



LOCATE, BY MEANS OF THE
LEIBNIZIAN METHOD OF ANALYSIS
SITUS AND INVERSION OF TANGENTS,
THE TRIPLY-ENFOLDING AND SELF-
GENERATING LYDIAN MODULAR
WAVE FUNCTION OF THE WELL-
TEMPERED MUSICAL SYSTEM INSIDE
OF AN ELECTROMAGNETIC TORUS.



Figure 1. Electromagnetic Torus.

FOREWORD.

As Lyn pointed out in [WHAT IS WHOSE LAW?](#) it was Johann Sebastian Bach who discovered that music was the best means of representing how the future generates the upward direction of change in the universe. The question this report will attempt to answer is: “What is the geometric curvature that can best represent an anticipation of the immediate future ahead?” The answer is to be found in a Leibnizian exercise in Analysis Situs which correlates music, electromagnetism, and the Peace of Westphalia.

WHAT CAUSES YOU TO ANTICIPATE SOMETHING BEFORE IT COMES TO BE?

This short report will correlate [Bach](#)'s musical artistic composition, [Ampère](#)'s electrodynamics, and Mazarin's [Peace of Westphalia](#) into a single multiply-connected dynamic. This analysis situation involves the use of the Leibnizian method of Inversion of Tangents, and the resolution of Plato's Ontological Paradox that Lyn and Matt have recently identified with the [Furtwängler Principle](#). The exercise shows that it is one thing to discover what the key signature of an artistic composition is, once you have heard it, yet, it is another to discover how a key signature is generated before you hear it. In the language of Leibniz, given a circle, you can easily find the property of a tangent, but given the property of a tangent, how do you find the curve that does not yet exist?

When considered from the standpoint of electrodynamics, the three Lydian modular waves of the well-tempered musical system generate each other by defining each other's pathways. Project these Lydian intervals of action inside of an electromagnetic solenoid Torus, and you will discover that their ordering is as if they had been harmonically pre-established to generate each other in a unique doubly-connected cyclical form, and in the dynamics of what is to come next. As I have demonstrated in my report on [The Mind Game of Changing Principles in Time](#), the key to the least action pathway lies in discovering the time-delay of what remains to be done next, because the future always lies in determining the proper power of the remainder of what is expected to be accomplished in order to change the present. As Lyn put it in his recent paper:

“The particular, and crucial important factor to be considered on this account, have had their principle origin in the development of the systematic work of Johann Sebastian Bach's introduction of the provable nature of “the future”: the future as the essential vantage-point of upward direction of change in the composition and performance of the combination of music with the process of living of human life.

“It was that Bach who emphasized the conception of basing composition explicitly on the oncoming (i.e. future) development within the body of the composition in progress, as in his collections of prelude and fugues. This replaced being confined to the present; instead we should have pursued the influence of the future instant, as being the appropriate moment of action for changing the present, enjoying thus the actually accessible future moment, not limited by the present, as providing a moment to have been achieved some moment ahead.

“The creative human individual is one whose present action will have occurred, literally, a moment ahead of the moment it is experienced! Thinking ahead!” (Lyndon LaRouche, [WHAT IS WHOSE LAW?](#) EIR, June 29, 2012, p. 9.)



Figure 2. Homemade Ampère toroidal and cylindrical magnet solenoids.

For example, the process of generating all twenty-four key signatures of the well-tempered musical system that Bach developed in his Preludes and Fugues is the same as the process by means of which a copper wire solenoid torus connected to a battery generates a magnetic field inside of its conducting coil. (**Figure 2**) In both cases, the process is anticipating the future such that electricity anticipates magnetism in the same way that a Lydian wave function anticipates compositional changes like key signatures. Compare the solenoid with the Lydian modular wave function of **Figure 3** and reflect on the process of what you don't see or hear with sense perception.

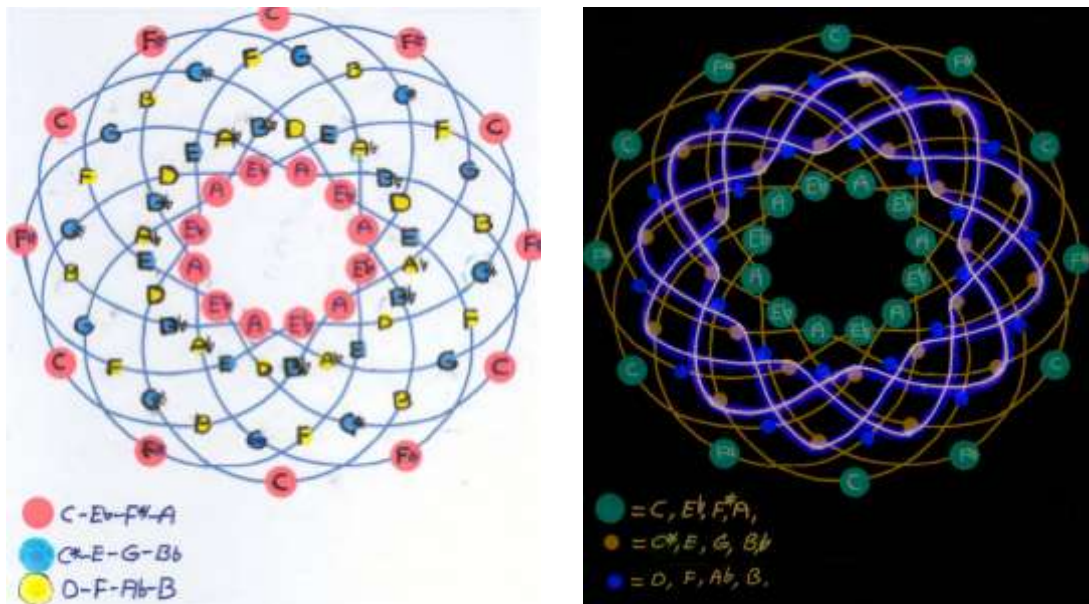


Figure 3. The Lydian self-generating wave function. The Lydian wave in red, **C-Eb-F#-A**, generates the cluster of key signatures in blue, (**C#**, **E**, **G**, and **B^b**). In turn, the Lydian wave in blue, **C#-E-G-B^b** will generate the cluster of key signatures in yellow, (**D**, **F**, **A^b**, and **B**), while the Lydian wave in yellow **D-F-A^b-B** will generate the key signatures in red (**C**, **E^b**, **F#**, and **A**), in both major and minor keys. The

conceptual view on the right shows the imaginary wave actions of the three blue key signatures as a magnetic field inside of the torus.

All of the twelve keys of the musical system are generated by three sets of Lydian intervals each of which, by its upward motion, anticipates the only new key signature that can lawfully be generated next. For example, sit yourself at a keyboard and generate the blue key signatures from the red Lydian intervals. Play the three Lydian intervals of **C-E^b-F#-A**, and listen to the intervals, not the notes. Listen to the entanglement of those intervals as they are calling for a harmonic ordering to come into existence. What key is your mind expecting to hear as a response to the unresolved resonance of those three specific intervals? You are right; you expect to hear the key of **B^b** major or minor. That is the key signature this specific Lydian modular wave is forecasting and is calling into existence, just a moment ahead. You can actually experience this ahead of time by humming these intervals in your mind, and then sing the resolution coming from the future as the key of **B^b**. No other harmonic arrangement can be generated from this unique Lydian wave.

Next, play on the keyboard the three intervals, **A-C-E^b-F#**. What anticipated resolution do you expect to hear? Right again; you hear coming from the immediate future just ahead, the key of **G** major or minor. What is going on here? How can this be true? Even if you don't know music, your mind is naturally tuned to anticipate a harmonic ordering that does not yet exist. Why? Because this is how the mind of the universe organizes life from the top down, by pulling it from the future. However, the future is not what is out there waiting for you to catch up to. The future is not a conspiratorial monetary system that you bet on. The future is an ordered process of growth that pulls you up through an upward change from the top down. This is what civilized nations used to call "natural law."

Continue this process, with any other Lydian wave intervals, and you will generate all twenty-four keys of the well-tempered system, because the result of this method of forecasting is based on Leibniz's method of inversion of tangents; that is, from the expected result that must come, of necessity, in response to an unresolved, but lawful Lydian modular wave. What can be forecasted are always the full harmonic intervals of the key signature that immediately follows the properly constructed wave up the scale. This is how you can know, in advance, how to determine the key signature for any classical artistic composition. However, the point to stress is not the key itself, but the fact that it is the dissymmetry of the Lydian modality which creates the symmetric quality of emotion that is intended to be generated from the immediate future ahead. The change of key merely represents a quality of emotional change.

During the 1781 to 1786 period, this is the revolutionary change in music that Mozart discovered from Haydn and that is how he expressed the changing Lydian principle in the series of his six Haydn String Quartets (K.387, 421, 428, 458, 464, 465). As Lyn put it in his 1992 paper on the Mozart Revolution:

"The characteristic feature of this 1781-1782 Haydn-Mozart revolution, is the successful development of a principled new conceptual approach to Classical composition, an approach by means of which a complete work – such as a theme with variations and fugue, or a sonata, or a symphony, or a concerto, or a string quartet, might achieve that singular perfection of unity of effect which is the subject of Plato's *Parmenides* dialogue, the dialogue of the matter of 'the One

and the Many.” (Lyndon LaRouche, [Mozart’s 1782-86 Revolution in Music](#), *FIDELIO Magazine*, Vol. 1, No. 4, Winter 1992.)

It is not as if the change of the Many in the well-tempered musical system was a hodgepodge of disparate things that come together into some artificial form of abstract unity. It is rather the process of a definite wave function as a whole which generates, a moment ahead of itself, what is currently being experienced as a specific unifying living human emotion. But, the change remains in some semi-obscure, hidden behind the scene, like the infinite of Pasteur. It comes back from the future, as if from an obscure domain, in a form that is not yet articulated and completed, but which also gives unity and completeness to the mission of future discoveries, including the means to accomplish it. So, one must be guided to follow the shadowy dissymmetry between the notes as if having to go “*through a glass darkly*.”

These intervals are like the opaque windows where the “*inner God*” of Pasteur resides, the proper location of a state of living infections where the fires of living processes begin to light up and grow or extinguish, degenerate, and die. However, these intervals can also become the location of a diseased mind using the unresolved musical potential of augmented or diminished measures just for effects, as in Jazz, for example. Because their functions represent the well-ordered infinite potential of change of any existential state of mind, these Lydian intervals can either be attached to a Dionysian passing moment, or to a Promethean future discovery of principle. By going in one direction, they get infected by some form of spontaneous degeneration, and by going in the other, they become immune through the curvature of the creative process itself, because one direction is death and the other is life.

This Lydian quality of emotion is what has been destroyed in the youth population of today, through the mental abuse of jazz and rock and roll since World War II. This loss has been the greatest cause of degeneration and banalization of the human mind and of all human cultures worldwide for the last hundred years. However, when used with a moral intention, this Lydian function represents the best modality measure against degeneracy. Its purpose is something like the experiment that Pasteur had made as a measure to keep germs from infecting a non-contaminated infusion.

Recall that in 1863, Pasteur presented to a public audience two flasks that contained the same liquid that had been open to air; one had contaminated water, and the other had remained uncontaminated for the previous four years, because the air entered through a *col de cygne*. It was the very geometric configuration of the *col de cygne* that gave Pasteur the solution to the fallacy of composition of “spontaneous generation.” As he reported to a public audience at the time:

“The only difference between them is this: in the first case, the dusts suspended in air and their germs can fall into the neck of the flask and arrive into contact with the liquid, where they find appropriate food and develop; thence microcosmic beings. In the second flask, on the contrary, it is impossible, or at least extremely difficult, unless air is violently shaken, that dusts suspended in air should enter the vase; they fall on its curved neck. When air goes in and out of the vase through diffusions or variations of temperature, the latter never being sudden, the air comes in slowly enough to drop the dusts and germs that it carries at the opening of the neck or in the first curves.



is that if I shake the vase violently, two or three times, in a few days, it contains animalcule or moldiness. Why? Because air has come in violently enough to carry dust with it.

“This experiment is full of instruction; for this must be noted, that everything in air save its dust can easily enter the vase and come into contact with the liquid. Imagine what you chose in the air – electricity, magnetism, ozone, unknown forces even, all can reach the infusion. Only one thing cannot enter easily, and that is dust, suspended in air. And the proof of this

“And therefore, gentlemen, I could point to that liquid and say to you, I have taken my drop of water from the immensity of creation, and I have taken it full of the elements appropriate to the development of inferior beings. And I wait, I watch, I question it, begging it to recommence for me the beautiful spectacle of the first creation. But it is dumb, dumb since these experiments were begun several years ago; it is dumb because I have kept it from the only thing man cannot produce, from the germs which float in the air, from Life, for life is a germ and a germ is Life. Never will the doctrine of spontaneous generation recover from the mortal blow of this simple experiment” (Quoted by René Vallery-Radot, [The Life of Pasteur](#), pp. 108-109)

As Pasteur showed, it is a matter of finding the right curvature. With respect to Bach, the curvature of the future represented by his Lydian modality process is already present in the Promethean opening measures of his *Prelude NO. 1 in C Major*. The curvature is there even before the performance of the piece begins. And suddenly the triply-enfolding wave comes up in the middle of the piece. **(Figure 4)** The modality is organized in such a manner that certain unwanted germs are excluded while other micro-organisms are welcome.

I remind the reader that the [Ave Maria](#) that Charles Gounod composed on the basis of this Bach Prelude was conducted by the composer himself at the opening celebration of the Pasteur Institute at the Paris Trocadero Palace in April of 1886. It was also Gounod’s way to celebrate this precise Bach modular wave function as a thankful memorial celebration for the two friends who had revived Bach and had introduced his works to the French composer, Felix and Cécile Mendelssohn.

Similarly, you might also want to imagine a situation where the soul of the universe works like music. It stretches like it, moves like it, and changes human emotions like it; that is to say, music develops itself like the coil of a living spiraling torus inside of which you can generate a series of well-tempered semi-obscure though-objects that have lived through one full revolution, have overlapped their original points of departure and, exceeding themselves by several more poloidal/toroidal revolutions, moved again through the same pathways as before, but in qualitatively changed ways that are completely different from what they were from the start. This is how a living memory modular wave function can be conceived of, as it is going through a process of transformation. This is the time it takes for a true revolution in human society to be completed.

However, by carrying a thought-object over the same mental territory, again and again, the mind is not only capable of doing intellectual work much better than before, thanks to new discoveries of principle it has made along the way and that it has been infected by, but it is also capable of making those revolutions faster, within an ever changing process which never comes back to its original state, because it composes with a constantly increasing rate of change in energy flux-density. What sort of lawful evolution does this process represent when, on the one hand you consider, for example, that computer designs have improved the speed at which menial tasks are accomplished in the small; while on the other hand the human mind, having liberated itself from such mediocre tasks, is further increasing its powers of free energy through integrating higher conceptions in the large?



Figure 4. The triple Lydian modular wave function taken from Bach's *Prelude NO. 1, in C Major*, is located at measures 12, 14, and 22.

The answer to this question cannot find a true resonance in the lies of John Von Newman and Norbert Weiner's fallacious attempts to devalue the human mind with machines. On the contrary, man has never been in competition with machines, but has always required that machines replace his menial tasks. In other words, this process does not proceed from the stupid oligarchical law that Norbert Weiner fantasized about in his 1948 *Cybernetics*, and in which he asserted that "the average human being of mediocre attainments or less has nothing to sell that is worth anyone's money to buy." (p. 27) Every human being has a potential for creativity, but it is not everyone who chooses to develop it.

Contrary to Weiner's view, this approach is based on the [Peace of Westphalia](#) *principle of the advantage of the other* which has abandoned the mediocre oligarchical world of monetary competitiveness and no longer considers human beings as having to sell their worth to anyone in order to survive. As I demonstrated in [The Mind Game of Changing Principles in Time](#), if you wish to make peace, you have to eliminate the dissonance between two peoples; that is to say, destroy company manners between nations. Thus, the new society that we are presently snatching from the womb of the future is aimed at reviving that Westphalia principle with the old program of Plato, whose intention had been to build the republican nation state on the creative ability of its citizens by eliminating the mediocrity of oligarchical false poets. So, let's fire the bad poets and throw the garbage out, including pseudo-scientists.

The point that Gilles Mazarin was making during the negotiating process of the [Peace of Westphalia](#) was precisely this musical process of elevating mankind upward to a higher geometry of life and creativity. But, this can only be accomplished by locating the appropriate conception that correlates artistic composition, science, and society. As Lyn reminded us, again, recently: "However, our insight into such matters requires comprehensible forms of access, forms which correspond to experiences which, in respect to the notion of Classical artistic composition and principles of physical science, which address concepts whose very natures locate their identity as if in between Classical artistic composition and essential principles of physical science." (Lyndon LaRouche, [WHAT IS WHOSE LAW?](#) EIR, June 29, 2012, p. 13.)

Thus, if you wish to have a mental image of what the mind of the universe looks like, look at music. It is the musical modality of the universe which underscores the need for this new higher law of correlation, the kind of thought-object modality that the true creative language of music speaks to. Therefore, it is uniquely Bach's mental Lydian modality which correlates and makes accessible the three domains of Classical artistic composition, electrodynamics, and the dynamics of a New Peace of Westphalia.

Such is the prelude and fugue modality that is able to cool off all social and international conflicts, even the bitterest religious ones, and brings nations to the higher energy flux-density that is required for humanity to survive. That very same musical modality includes those three future states into one integrated gestalt from which what has not yet come to be, namely a fusion based economy, is already here in the principled form of its future coming into being. As Lyn put it: "The changes are vast, and rapid, and they are very large. Prepare to enjoy the change." And, remember, the future always leads you to an upward direction of changing the power of what remains to be done from the top down.

Joyful hmm?